

### REMARKS

Claims 30-31, and 48-49 have been amended. Claims 40 and 57 have been cancelled without prejudice or disclaimer. Claims 30-39, 41-56, and 58-63 are currently pending in the present application. The examiner's indication that claims 44 and 60 are allowable is acknowledged with appreciation.

Independent claims 30 and 48 have been amended to require that an amount of from about 1 to about 5 percent by weight, based on the weight of the flour, of polydextrose anti-staling agent be used in the step of forming a baking dough. Basis for the range of polydextrose of from about 1 percent to about 5 percent by weight, based on the flour weight, for a baking dough composition can be found at page 7, first full paragraph of the specification. This amendment is also supported by original claim 2.

Dependent claims 31 and 49 have been amended to require an amount of from about 2 to about 3 percent by weight, based on the weight of the flour, of polydextrose anti-staling agent be used in a dough composition. Basis for the range of polydextrose of from about 2 percent to about 3 percent by weight, based on the flour weight, for a dough composition can be found in original claim 3. No new matter has been added.

#### I. The Claims Are Patentable Over Dartey et al.

Claims 30-31, 36 and 48-50 have been rejected under 35 U.S.C. §102(b) as being anticipated by Dartey et al., U.S. Patent No. 4,678,672 ("*Dartey*"). Further, claims 37-38, and 54-55 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Dartey* in view of The Encyclopedia of Chemical Technology, 1992 Edition ("*The Encyclopedia of Chemical Technology*"). These rejections are respectfully traversed and reconsideration is requested for the reasons which follow.

The independent claims of the present application relate to methods for making baked products having improved anti-staling properties, as well as to baking dough used in methods for baking which provide baked products with improved anti-staling properties. The present inventors have surprisingly found that water-soluble polydextrose can serve as an anti-staling agent when employed in an amount of between about 1 percent and about 5 percent by weight, based on the weight of the flour. The water-soluble polydextrose anti-staling agent gives a surprising improvement in the staling properties of baked products. None of the prior art cited by the Examiner teaches the use of water-soluble polydextrose in baked product in such amounts, or recognizes the unique anti-staling property of water-soluble polydextrose.

*Dartey* teaches a reduced calorie cracker product produced from dough compositions which may, according to *Dartey*, contain 25-85 percent by weight of flour, 0-10 percent by weight of fat or shortening, 5-20 percent by weight of water-soluble polydextrose, 0-5 percent by weight of an emulsifier, 0.5 to about 5 percent by weight of a leavening system, and 1.5 to 10 percent of a cellulose bulking agent. Thus, selecting 85% by weight of flour and 5% by weight of polydextrose as the closest embodiment to the present invention as claimed in the amended claims, this translates into a requirement of at least 5.5% by weight, based on the weight of the flour, of polydextrose according to the teachings of *Dartey*.

After entry of this amendment, claims 30-31, 36 and 48-50 now require that the amount of water-soluble polydextrose be from about 1 percent to about 5 percent by weight, based on the flour weight, which is clearly outside the range of at least 5.5 percent of polydextrose by weight, based on the flour weight, disclosed by *Dartey*. Accordingly, *Dartey* does not anticipate the present claims, as amended, and, for at least this reason, reconsideration and withdrawal of the rejection of claims 30-31, 36, and 48-50, as amended, under 35 U.S.C. §102(b) as being anticipated by *Dartey* is requested.

With respect to the alleged obviousness of any of the pending claims over *Dartey* alone or in combination with *The Encyclopedia of Chemical Technology*, *Dartey* clearly does not contemplate the presently claimed compositions and, in fact, teaches a skilled person away from employing the relative amounts of flour and polydextrose which are employed by the present invention. First, *Dartey* teaches that its compositions should contain no less than 5.5% by weight of polydextrose, based on the flour weight. Thus, the skilled person reading *Dartey* has no reason, suggestion or motivation to employ 1-5% by weight of polydextrose based on the flour weight.

Moreover, in order to arrive at the present invention, a skilled person would have to select a dough composition from *Dartey* having a flour content at the high end of the disclosed range. Since the 25% calorie reduction can only be achieved following the teachings of *Dartey* by reducing flour or replacing fats/shortening with water-soluble polydextrose, selecting a flour content at the high end of the range means that the 25% caloric reduction must be achieved primarily by replacement of fats/shortening with water-soluble polydextrose. In other words, the more flour present in the composition, the more fats/shortening must be replaced by water-soluble polydextrose to achieve the desired caloric reduction, therefore the more water-soluble polydextrose in the composition.

This is important because a skilled person reading *Dartey* would conclude that an acceptable cracker dough composition with a high flour content and a water-soluble polydextrose content below the lower limit of the range in *Dartey*, as would be required to arrive at the present invention, would not achieve the desired level of caloric reduction. This would be the case because either there would be an insufficient caloric reduction or because too great of a reduction of fat/shortening would be required to provide the 25% caloric reduction and, as a result, an unacceptable dough composition containing too little fat/shortening would result. Thus, such compositions are clearly not contemplated by *Dartey*. This is consistent with Examples 1-2 of *Dartey*. In Example 1, the flour content is higher than the flour content of Example 2, and thus, the polydextrose content in Example 1, relative to the flour content

(i.e., 18.7% by weight), is also higher than the polydextrose content of Example 2, relative to the flour content (i.e., 16.6% by weight).

Accordingly, for these reasons the teachings of *Dartey* do not lead a skilled person to the particular methods or compositions of the present invention. In addition, the Examiner has relied on *The Encyclopedia of Chemical Technology* as teaching the addition of enzymes to improve volume, texture and storage properties of bread. However, this reference does not cure the deficiencies of *Dartey* with regard to teaching the appropriate quantity of water-soluble polydextrose to be used in the compositions of the present invention since it contains no teaching or suggestion to motivate a skilled person to reduce the polydextrose content of the compositions of *Dartey* to below 5% by weight, based on the flour weight. For these reasons, it is considered that claims 30-39, 41-56, and 58-63 are clearly novel and unobvious over *Dartey* taken alone, or in combination with *The Encyclopedia of Chemical Technology*. Favorable consideration and withdrawal of the rejection is respectfully requested.

## II. The Claims Are Patentable Over Engelbrecht et al.

Claims 30-32, 34, 39-41, 43, 48-49, 51-52 and 56-59 stand rejected under 35 U.S.C. §102(b) as being anticipated by Engelbrecht et al., U.S. Patent No. 5,164,216 (*Engelbrecht*). Further, claims 33, 35, 37-38, 42, 45-47, 53-55 and 61-63 stand rejected under 35 U.S.C §103(a) as being unpatentable over *Engelbrecht* in view of *The Encyclopedia of Chemical Technology*. Claims 40 and 57 have been cancelled without prejudice or disclaimer. These rejections, at least insofar as they apply to the pending claims, as amended, are respectfully traversed and reconsideration is requested for the reasons, which follow.

*Engelbrecht* relates to a microwaveable bread product made from dough which may include flour, water, leavening agent, about 7 to about 15 percent by weight of shortening, based on the total weight of flour, and about 2.0 percent by weight of fiber, based on the total weight of the flour. Among

the materials which are mentioned for use as fiber in the Engelbrecht patent are oat bran, wheat bran, soy polysaccharide, psyllium mucilloid, methyl cellulose, and polydextrose. *See Engelbrecht, col. 3 ln 55-58.* Further, *Engelbrecht* discloses that soluble fibers, and natural and synthetic fibers work equally well. *See Engelbrecht, col. 3, ln 53-55.*

Based on the state of the art as of the filing date of the present application, the passing reference in *Engelbrecht* to the use of polydextrose as a fiber material, without specific exemplification, does not anticipate the present claims. More specifically, at best *Engelbrecht* provides a broad, generic disclosure of a number of parameters (i.e., type of polydextrose, type of fiber, solubility of fiber, and amount of fiber and amount of flour) which could be potentially manipulated to arrive at something similar to the present invention, as claimed in the amended claims. This, however, is clearly insufficient to establish anticipation under 35 U.S.C §102 (b) which requires identity of disclosure. *See In re Meyer, 202 USPQ 175, 179 (CCPA 1979).*

Specifically, to arrive at the present invention in view of *Engelbrecht*, the skilled person would have to do the following:

- 1) Select polydextrose to be the fiber from the extensive list of fibers given in *Engelbrecht*,
- 2) Determine that the fiber should be water-soluble,
- 3) Select a water-soluble polydextrose as the fiber despite the fact that water-soluble polydextrose is generally not considered to be a fiber due to its partial digestibility by humans as explained below, and
- 4) determine that the water-soluble polydextrose should be used in an amount of 2-5% by weight, based on the flour weight, when *Engelbrecht* teaches that the fiber content should be 2-15% by weight, based on the flour weight and *Engelbrecht* contains no specific teaching of the amount that should be used when polydextrose is selected to be the fiber.

In addition, nowhere in *Engelbrecht* is the specific use of water-soluble polydextrose disclosed or exemplified. Instead, *Engelbrecht* discloses the use of a “fiber” grade polydextrose. Water-soluble polydextrose is not generally considered to be “fiber.” Typically, “fiber” in the context of a food composition means a polysaccharide that is not digestible by a human, for example, oat fiber which is mainly composed of cellulose, which contains predominantly  $\beta$ -glucoside structures in its backbone and thus is not digestible by humans, and has essentially zero calories. In contrast, the water-soluble polydextrose is at least partially digestible by humans. In fact, the water-soluble polydextrose used in the present invention typically has a calorie content of about 1 kcal/g because of its partial digestibility by the human digestive system. Accordingly, the water-soluble polydextrose used in the present invention is clearly different from the fiber-grade polydextrose contemplated by *Engelbrecht*. Therefore, in addition to the skilled person having to make the four choices listed above, *Engelbrecht* lacks a disclosure of at least one element, namely, water-soluble polydextrose, which is required by all of the pending claims. Therefore, pending claims 30-32, 34, 39, 41, 43, 48-49, 51-52 and 56, 58-59 should be considered novel in view of *Engelbrecht* and withdrawal of the rejection of these claims under 35 U.S.C. 102 (b) over *Engelbrecht* is respectfully requested.

With respect to the issue of obviousness, there must be some reason, suggestion or motivation in the art to make the specific combination of the various disclosed parameters in the manner required to arrive at the presently claimed invention. See, e.g., *In re Deminski*, 230 USPQ 313, 316 (Fed. Cir. 1986). The mere fact that the parameters of the prior art could be so combined does not make the combination obvious unless the prior art suggested the desirability of the combination. See, e.g., *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). No such suggestion is present in the references of record for making the specific combination claimed in the present claims, as amended.

As discussed above, the basis of the presently claimed invention is the use of a specified amount of water-soluble polydextrose to inhibit staling in various yeast leavened baked products and/or in

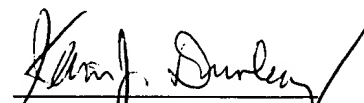
leavened bread products. The art of record does not even recognize that water-soluble polydextrose may exhibit anti-staling properties and provides no disclosure leading one of ordinary skill in the art to use water-soluble polydextrose in the amounts or manner claimed to achieve the anti-staling effect.

In addition, the Examiner has relied on *The Encyclopedia of Chemical Technology* as teaching the addition of enzymes to improve volume, texture and storage properties of bread. However, this reference does not cure the deficiencies of *Engelbrecht* discussed above. Moreover, neither *Engelbrecht* nor *The Encyclopedia of Chemical Technology* recognizes the significant, unexpected beneficial effect of adding water-soluble polydextrose to a baked product to provide anti-staling properties.

Accordingly, all of the present claims are considered to be unobvious over *Engelbrecht* taken alone or in combination with *The Encyclopedia of Chemical Technology* (or any other art of record) on the basis that a person of ordinary skill in the art when reading *Engelbrecht* would have no reason or motivation to select all of the specific parameters as required to arrive at the present invention. For at least these reasons, favorable consideration and withdrawal of the rejection over *Engelbrecht* in combination with *The Encyclopedia of Chemical Technology* is respectfully requested.

In view of the foregoing remarks, Applicant respectfully submits that all of the pending claims are in condition for allowance and respectfully requests a favorable Office Action so indicating.

Respectfully submitted,

  
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**MARKED UP COPY OF THE CLAIMS SHOWING THE CLAIM AMENDMENTS****IN THE CLAIMS**

30. (Four times Amended) A method of making a baked product having improved anti-staling properties, the method comprising the steps of:

forming a baking dough by combining flour, yeast, water, and water-soluble polydextrose anti-staling agent in an amount of from about 1 percent to about ~~510~~ percent by weight, based on the weight of the flour; and

baking the dough.

31. (Four times Amended) The method of claim 30 wherein said polydextrose is present in the baking dough in an amount of from about ~~24~~ percent to about ~~310~~ percent by weight, based on the weight of the flour.

48. (Four times Amended) A baking dough used for making a baked product, the baking dough comprising:

flour, yeast, water, and water-soluble polydextrose anti-staling agent in an amount of from about 1 percent to about ~~510~~ percent by weight based on the weight of the flour.

49. (Four times Amended) The dough of claim 48 wherein said polydextrose is present in the baking dough at a level of between about ~~24~~ percent and about ~~310~~ percent by weight, based on the weight of the flour.